

The pancreas

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The pancreas is an organ within the body which plays an important part in the digestion of food. The pancreas also produces insulin, the main chemical in the body for balancing levels of sugar in the blood.

This factsheet describes what the pancreas is and outlines what can go wrong with it.

Location

The pancreas is about ten inches long, and is located behind the stomach on the left-hand side of the body. It is shaped like a tadpole, with a head and a longer tail. The head is attached to the intestine, into which the stomach empties partly-digested food. The pancreas is also connected to the liver and the bowel.

What the pancreas does

The pancreas produces chemicals called enzymes which are essential to the digestion of food. These enzymes break down food into very small particles that the body can then absorb.

Enzymes are produced in small glands in the pancreas and then flow through the organ into the first part of the bowel. The digestive juices produced in the pancreas are not active until they have reached the bowel. The main enzymes produced by the pancreas are amylase, which is important in the digestion of carbohydrates (foods like bread and potatoes), trypsin which digests protein (from meat, cheese, milk and pulses like beans), and lipase, which digests fat.

Glucose is the body's source of energy. The level of glucose in the body is kept stable by insulin, which is also made in the pancreas. If the pancreas is not working properly and is not producing insulin as it should, then a condition called diabetes can develop.

Pancreatitis

Pancreatitis is an inflammation of the pancreas and is a potentially very serious condition. It is sometimes seen in people with HIV, and can be caused by some anti-HIV drugs, as well as other medications. However, pancreatitis is most often caused by very heavy drinking of alcohol.

Symptoms include feeling sick, being sick, and pain, which can be very severe in the area where the ribs join in the middle of the chest. The tummy can also be very tender and painful to the touch. If the pancreas stops working properly, food might not be digested properly and this can cause weight loss and diarrhoea, which is pale and very smelly due to undigested fat.

The rarely used anti-HIV drug ddl (didanosine, *Videx*) is the drug most associated with pancreatitis. Very rarely, anti-HIV drugs in the same class as ddl (NRTIs) may also cause pancreatitis. People who have other risk factors for pancreatitis, particularly heavy drinking and a very low CD4 cell count are at higher risk of getting pancreatitis if they are taking ddl. In addition, people who are receiving treatment for HIV including ddl, and treatment for hepatitis C at the same time, seem to be at higher risk of developing the condition.

In some people, pancreatitis causes no more than very mild symptoms or changes in enzyme levels which can only be detected with blood tests. But in more extreme cases, pancreatitis can be fatal. In some people, an initial attack of pancreatitis can cause damage and lead to long-term illness. This is called chronic pancreatitis.

Tests

A number of tests can be used to monitor the health of your pancreas. Blood tests can be used to see if there has been any change in the levels of enzymes produced by the pancreas. X-rays, scans and ultrasounds can be used to see if the pancreas has become inflamed and enlarged. In people

with chronic pancreatitis an ERCP test may be involved. This involves passing an extremely small camera through the mouth and into the pancreas in order to examine it.

Treatment

Depending on the seriousness of a bout of pancreatitis, medication may be needed to help control enzyme and insulin production. It may also be necessary for the person to be admitted to hospital to receive intravenous fluids to prevent dehydration which can be caused by vomiting and diarrhoea.

Medicines to control pain may also be needed, possibly consisting of anti-inflammatory drugs like naproxen.

If ddl is causing pancreatitis, then the drug should be stopped and switched to an alternative treatment .